



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/728,468  | 12/05/2003  | Paul C. Wang         | ITDE-PAV103US       | 9470             |
| 23122   | 7590        | 09/16/2005           | EXAMINER            |                  |
| RATNERPRESTIA<br>P O BOX 980<br>VALLEY FORGE, PA 19482-0980 |             |                      | SOTOMAYOR, JOHN B   |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 3662                |                  |

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/728,468

Applicant(s)

WANG ET AL.

Examiner

John B. Sotomayor

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-13, 16-18 and 20 is/are rejected.
- 7) ☒ Claim(s) 7-9, 14, 15 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05DEC03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement filed December 5, 2003 has been entered and considered. An initialed copy of the PTO-1449 by the Examiner is attached.

***Drawings***

2. The drawings filed on December 5, 2003 are acceptable.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 10-13, 16-18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hawkins et al ('150).

The claim is considered met by Hawkins et al ('150) who disclose a method and system including, inter alia, receiving a plurality of signals from radar emitters, generating data components for each received radar emitter, forming samples using data components, and sorting the samples into clusters representing each emitter.

Hawkins et al ('150) disclose at column 16, that the tracker/database 44 is responsible for identifying LPI radio type (based on signal duration and frequency

band), association of LPI signal pulses with known active transmissions, associating of LPI signal pulses to form new active transmissions, association of the active transmissions with a previously identified network (based on radio type, frequency band, pulse phase and possibly LOB-Line of Bearing, the direction of the transmitter), and the creation of previously unidentified networks. The tracker/database 44 also maintains the list of DF measurement data for each active transmission. This task will generate automatic reports of network information and respond to manual requests for information by the operator.

With respect to the PDWs, Hawkins et al ('150) disclose at column 17, that the basic steps taken by the tracker/database 44 is shown in FIG. 11. When a new pulse (PDW) is received by the tracker/database 44, it identifies the radio type, then determines if it matches one of the active transmissions in the "official" database (a match is determined by the PARINT pulse phase tracking algorithm, which is described in detail later). If it matches, it associates the pulse with the active transmission, updates the active transmissions parameters, and goes to get the next pulse. Otherwise, it determines if the pulse matches one of the candidate transmissions. If it matches, the candidate transmission parameters are updated. If it doesn't match, then the new pulse is entered into the candidate database as a candidate transmission with only one pulse detected.

With respect to the weighting of data, Hawkins et al ('150) disclose at column 22, that in order to speed the processing, the software is implemented such that the raw data, high side and low side pointers are always an integral number of FFT samples.

Also, the DFT coefficients modified by the window function 118 are precomputed at initialization time for all bins.

•

### ***Allowable Subject Matter***

5. Claims 7-9, 14, 15, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited prior art show various radar signal detecting systems.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Sotomayor whose telephone number is 571-272-6978. The examiner can normally be reached on Mondays to Fridays from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom H. Tarcza, can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 3662

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "J.B. Sotomayor".

John B. Sotomayor  
Primary Examiner  
Art Unit 3662